

ABSTRACT

An ion beam apparatus comprises an ion source 2 which extracts an ion beam 4, a mass separation electromagnet 6 which separates an ion beam 4 of desired mass from the ion beam 4 extracted from 5 the ion source 2, a scanner 12 which scans the injected ion beam 4 with a given scan center as center within a given scan surface, an electrostatic deflector 30 which deflects the ion beam through 90° so that an ion beam of desired energy in said ion beam travels in a direction perpendicular to said scan surface within a 10 circular-arc-shaped deflection zone centered on the scan center, and a scanning mechanism 54 which retains a target 50 and which mechanically, reciprocally moves the target 54 in a direction in which the target crosses the ion beam passed from the electrostatic deflector 30 at a given angle.

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